

## ABSTRACT

Screening methods for asthma and analogous diseases in which activated eosinophils are found at the disease site are provided. The methods involve assaying for the presence of brominated tyrosine species in a bodily sample which has been obtained from a test subject. The brominated tyrosine species are either free in the sample or protein bound. In one embodiment, the assay involves measuring the amount of a brominated tyrosine species, particularly 3-bromotyrosine, 3,5-dibromotyrosine, or combinations thereof (referred to hereinafter collectively as the "diagnostic marker") in a bodily sample from the test subject. In another embodiment for determining the prognosis of asthma in a test subject, the concentration or content of the diagnostic marker is determined in bodily samples taken from the test subject over successive time intervals. The concentrations are compared to determine the prognosis of the asthma. In another embodiment of the invention for monitoring the response of the test subject to treatment with an anti-asthmatic drug, the concentration or content of the diagnostic marker is measured in bodily samples obtained from the test subject before and after such treatment. The present invention also relates to a diagnostic kit and to a diagnostic reagent for diagnosing asthma and analogous diseases which are associated with activated eosinophils.